



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,471	08/03/2001	David Marshall	10014782-1	7017

7590 11/04/2003
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

NGUYEN, MINH T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/921,471

Applicant(s)

MARSHALL ET AL.

Examiner

Minh Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 8/7/03 has been entered.

Information Disclosure Statement

2. The references listed in the IDS filed on 4/2/03 have been considered. Because the copy of PTO-1449 filed on 4/2/03 has been crossed-out, they are cited in the enclosed PTO-892 in this Office Action instead, to indicate they are considered by the Examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2816

Claims 8, 10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,574,206, issued to Todokoro et al.

As per claim 8, Todokoro discloses a method (Fig. 1) for receiving a digital signal (at node 10, Figs. 2A and 2B show the input is digital), comprising:

comparing (by the comparator 12, column 3, lines 23-24) the digital signal to a reference voltage (the voltage at node 16, column 3, lines 23-24);

determining when the digital signal has changed from greater than the reference voltage to less than the reference voltage (column 3, lines 28-29); and

reducing the reference voltage after the digital signal has changed from being greater than the reference voltage to being less than the reference voltage (column 3, lines 29-30).

As per claim 10, Todokoro discloses a method for receiving a digital signal, comprising:

comparing (comparator 12, column 3, lines 23-24) the digital signal to a reference voltage (node 16, column 3, lines 23-24);

determining when the digital signal has changed from being less than the reference voltage to being greater than the reference voltage (column 3, lines 25-26); and

increasing the reference voltage after the digital signal has changed from being less than the reference voltage to being greater than the reference voltage (column 3, lines 30-31).

As per claim 12, Todokoro discloses a method (Fig. 1), comprising:

adjusting a reference between a first nominal reference level and a second nominal reference level (by switching the switch 14 from node 18 to node 24);

adjusting the reference between the second nominal reference level and the first nominal reference level (by switching the switch 14 from node 24 to node 18);

Art Unit: 2816

comparing (using the comparator 12) signal (at node 10) to the first nominal reference level when the signal is closer to the first nominal reference level than the second nominal reference level (the description is on column 3, lines 21-34); and

comparing (using the comparator 12) the signal (at node 10) to the second nominal reference level when the signal is closer to the second nominal reference level than the first nominal reference level (also description is on column 3, lines 21-34)

As per claim 13, the recited limitation is met because the result of the comparison by the comparator 12 is used to initiate the counter 26 to adjust the reference levels (20 and 22) by the selector 14.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,574,206, issued to Todokoro et al.

As per claim 9, Todokoro discloses a method comprises steps recited as discussed in claim 8, he explicitly discloses the clock signal 28 (the waveform is shown in Fig. 2D) is used to control the timing of the reference voltage and the clock signal has the frequency higher than the frequency of input signal.

Todokoro does not explicitly disclose the clock signal has a frequency so that the reference voltage is reduced over a period of time that is greater than the expected time for the digital signal changes from one state to another, i.e., it is merely a matter of varying the frequency of the clock signal.

However, it has been ruled that “where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”. See MPEP 2144.05 for further discussions.

It would have been obvious to one skilled in the art at the time of the invention was made to adjust the frequency of the clock signal in the Todokoro circuit frequency so that the reference voltage is reduced over a period of time that is greater than the expected time for the digital signal changes from one state to another.

The motivation/suggestion for that would be to obtain a workable range for Tokodoro circuit in applications which call for such particular range.

As per claim 11, rejected for the same reasons and motivation noted in claim 9.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2816

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'Minh Nguyen', followed by the date '10/31/03' written in a similar cursive style.

Minh Nguyen
Primary Examiner
Art Unit 2816